

WORLD FEDERATION FOR THE PROTECTION
OF ANIMALS,
ZURICH, SWITZERLAND.

BRUCE D. BARNETT

DEPT. OF FOREST ZOOLOGY,
STATE UNIVERSITY OF NEW YORK,
COLLEGE OF ENVIRONMENTAL SCIENCE AND
FORESTRY,
SYRACUSE, NEW YORK, U.S.A.

JAMES A. COHEN

AYYA NADAR JANAKI AMMAL COLLEGE,
SIVAKASI, TAMIL NADU.

A. J. T. JOHNSINGH

DIRECTOR OF RESEARCH INTO ANIMAL
PROBLEMS,
HUMANE SOCIETY OF THE U.S.A.
August 11, 1977.

MICHAEL W. FOX

REFERENCES

- COHEN, J. A. (1977): A review of the biology of the dhole on Asiatic Wild dog (*Cuon alpinus*). *Anim. Reg. Stud.* 1: 141-158.
- FOX M. W. (1975): In Search of Wildness and Whistling Jungle Dogs. Unpublished.
- FOX, MICHAEL & JOHNSINGH, A. J. T. (1975): Hunting and feeding in wild dogs. *J. Bombay nat. Hist. Soc.* 72(2): 321-326.
- KRISHNAN, M. (1972): An ecological survey of the large mammals in peninsular India. *J. Bombay nat Hist. Soc.* 69: 26-54.

2. OBSERVATION ON CARNIVOROUS HABIT OF AN IRRAWADDY SQUIRREL, *CALLOSCIURUS PYGERYTHRUS* (GEOFFROY)

During a trip to North Lakhimpur, Assam, in October 1976, an interesting behaviour of the Irrawaddy Squirrel, *Callosciurus pygerythrus* (Geoffroy), was noted.

On October 15th 1976 at about 8.00 hours, I noticed the animal eating the fruit of an Olive tree (*Olea europaea*) in a small orchard (about an acre in area) having a pond and other trees, namely Embelic (*Embelica officinalis*) in fruit, shrubs such as Lemon (*Citrus lemon*) and undergrowth mainly of Pineapple (*Ananas sativus*) and other fruit-bearing herbs, just behind the house where I was camped. The squirrel slipped away when an attempt

at closer observation was made. On that very day at about 16.00 hours, the cackling call of a squirrel was heard, but unfortunately, it could not be traced. The following day two mongooses were seen busily digging the earth beside the pond. With a view to catching them, two traps were set in the bushes at about 13.00 hours with intestine of chicken as bait. After about two hours, to my great surprise I found that an Irrawaddy Squirrel, instead of a mongoose, had been trapped. It was still feeding on the bait. The squirrel was allowed to consume the whole of the bait without being disturbed.

According to literature (Prater 1971), *Callosciurus pygerythrus* (Geoffroy) feeds on fruit, leaf-buds and is particularly partial to oranges. In spite of the availability of abun-

dance of fruits on the trees in and around the area the preference for animal food is highly interesting.

ZOOLOGICAL SURVEY OF INDIA,
8, LINDSAY STREET,
CALCUTTA 700 016,
December 26, 1978.

SANTANU GHOSH

REFERENCE

PRATER, S. H. (1971): *The Book of Indian Animals*. ed. 3. Bombay Natural History Society, Bombay.

3. UNUSUAL RAT FEEDING BEHAVIOUR ASSOCIATED WITH CATTLE AFFECTED WITH FOOT AND MOUTH DISEASE

(With a text-figure)

An epidemiological investigation aimed at revealing the possible role of rodents in the transmission of foot and mouth disease was conducted in Purulia district of West Bengal. Rats (*Rattus rattus*) and squirrels (*Funambulus pennanti*) were trapped in and around cow sheds which had harboured confirmed cases of foot and mouth disease two months previously. Their blood was collected and the serum was tested as described below.

The study utilized an immuno-diffusion test (Virus Infection Associated antigen) to detect the presence of serum antibodies specific for foot and mouth disease (FMD). Antibodies to the Virus Infection Associated (VIA) antigen cross reacts with all four types of foot and mouth disease (O, A, C and Asia₁) found in India (Cowan and Graves 1966) and is diagnostic with just a single test (unlike serum neutralization and complement fixation tests).

The results of this study demonstrated that no squirrels (10 serum samples) and no rats (47 serum samples) were infected by the FMD

virus despite an intimate association with the infected cattle. (Many villagers reported that they had seen rats feeding on the foot lesions of the FMD infected cattle when they would enter the cow shed at night.)

An unexpected result was a definite precipitation line between the unknown rat serum wells and the control bovine antisera wells in twelve out of forty-seven cases (see figure 1). This same phenomena was never observed with any of the squirrel sera.

The precipitin line between the control bovine serum and unknown rat serum depicted in the figure may be explained by various interpretations. It could be due to; a non-specific reaction, the presence of a cross-reacting antibody, a common infective process, or specific antibodies in one serum directed toward serum components of the other. The last explanation seems more plausible for the reasons outlined below.

Rats were seen feeding on the FMD lesions at which time serum substances undoubtedly